

Twenty-third in the Fuertes print series

[The original painting by Louis Agassiz Fuertes was reproduced in *Bird-Lore*, Vol. XI, No. 6, November-December, 1909. The text, written by Frank M. Chapman, was published in *Bird-Lore*, Vol. XII, No. 1, January-February, 1910, and is here reprinted with minor updating. This was the first of the series on plumage of sparrows. The scientific names have been taken from the A.O.U. Check-list, 6th Edition, 1983.]

Notes on the Plumage of North American Sparrows

Frank M. Chapman

IN THIS SERIES OF ARTICLES it is proposed to comment briefly on the characters which distinguish the more closely related species and races of sparrows figured in the accompanying plates, and also to call attention to their seasonal changes in plumage.

Sparrows, like other passerine birds, are hatched with but a slight downy growth of feathers, well termed by Dwight the "natal down," which, while the bird is in the nest, is succeeded by the juvenal or nestling plumage to the tips of which portions of the natal down are generally attached when the bird leaves the nest. This nestling plumage is shortly succeeded by the winter plumage which is acquired by molt of the body feathers and also sometimes of the wings and tail.

The adult, following the prevailing law of feather renewal, passes from summer to winter plumage by a complete post-breeding molt. The spring molt is usually not extensive, and, in many species, the change from winter to breeding plumage is accomplished by wear.

Chipping Sparrow (*Spizella passerina*, Figs. 1 and 2). The sexes are alike, and in the adult plumage the species does not closely resemble any other of our sparrows, the chestnut cap, black postocular stripe and black bill being its more obvious distinguishing characters. The nestling is streaked below, but fall specimens (Fig. 2, the underparts are here not quite gray enough), both of the adult and young, resemble each other; the crown is now streaked, the postocular stripe is less pronounced, and the bill is dusky. In general pattern of markings the bird now resembles both Brewer's and the Clay-colored sparrows, but may be easily distinguished by its more rufous color. In the spring, the young bird acquires, and the adult regains, the breeding plumage by partial molt. The western Chipping Sparrow resembles the eastern form but is paler, and grayer above.

American Tree Sparrow (*Spizella arborea*, Fig. 3). A blackish or chestnut spot in the center of the breast (which, however, is sometimes barely evident) and a yellow mandible are the American Tree Sparrow's chief distinguishing marks. The sexes are alike, and the slight seasonal differences in plumage are occasioned by fading and wear. The nestling is heavily streaked below, but after molting into winter plumage resembles the adult. The spring feather-growth is confined to the chin, and the breeding birds differ from winter ones in being somewhat grayer, in the absence of margins to the feathers of the crown and their reduction on the feathers of the back, giving to the last-named area a more sharply streaked appearance.

The western American Tree Sparrow differs from the eastern race chiefly in being paler above.

Field Sparrow (*Spizella pusilla*, Fig. 4). The Field Sparrow needs comparison with no other species, its general reddish brown color and pinkish bill easily distinguishing it. The sexes are alike, and there are no marked seasonal changes in plumage. The nestling is streaked below, but in the fall the young bird resembles the adult, and both differ from summer specimens in being richer in tone and in having a darker suffusion of buff on the breast and sides. The spring molt appears to be restricted to the chin, and the breeding plumage is acquired by wear and fading.

The western Field Sparrow is a strongly marked race which is much paler than the eastern form, the general tone of the color above being no browner than in the Clay-colored Sparrow

Clay-colored Sparrow (*Spizella pallida*, Fig. 5). The Clay-colored and Brewer's sparrows closely resemble one another and at times are distinguished with difficulty. In breeding plumage the former is somewhat browner above, with the black streaks decidedly broader; the hind-neck is grayer; the median crown stripe and superciliary line more pronounced, and there is a more or less sharply defined ear-patch. I have, however, seen fall and winter specimens in which these characters were less pronounced, and which so closely approached some specimens of Brewer's Sparrow that it was questionable to which species they belonged.

The Clay-colored Sparrow shows no variation with sex, and, as a rule, but little with age or season. Adults, in fall, resemble the young, and at this season the plumage averages browner than in summer; this affects the sides of the head and breast, and the superciliary line is not so well marked, the crown stripe less defined, and the gray hind-neck band is not evident. The spring molt, so far as I have observed, occurs in April and involves the chin, crown, wing-coverts and tertials; and the renewal of feathers in these parts, with some fading of the feathers which are not molted, brings the bird into breeding plumage.

Brewer's Sparrow (*Spizella breweri*, Fig. 6). This species may be known from its nearest relative, the Clay-colored Sparrow, by the characters mentioned under that species, with which it agrees in varying but little with age or season. Fall specimens are more buffy than those in summer plumage, and the young of the year, at this season, have the wing-coverts tipped with buff. The nestling is streaked below, and in this plumage is difficult to distinguish from the nestling of the western Chipping Sparrow.

The spring molt appears to be confined to the head, where there is a slight feather-growth, and one April specimen has been examined which is acquiring new tertials, but the change to summer plumage is affected chiefly by wear and fading

